FI-FO Series Portable Raman Analyzers with Fiber Probe, 785/830/1064 nm

Model FI-FO Series · waveqvanta.com/products/fi-fo-series-portable-raman-analyzers-with-fiber-probe

Portable fiber-probe Raman analyzers for on-site identification and laboratory measurements.



The FI-FO series are portable Raman spectrometers with a flexible fiber probe, packed in a rugged protective enclosure for transport to the field. They are suited to rapid on-site inspection as well as laboratory work, and are available with 785 nm, 830 nm or 1064 nm excitation and with an Android (-A) or Windows (-W) operating system.

Key features

- Self-contained instrument that needs no additional accessories for operation
- Flexible Raman fiber probe for measuring samples in place
- Excitation at 785, 830 or 1064 nm with laser power adjustable from 0 to 500 mW
- Back-illuminated or cooled CCD detectors (785/830 nm models) and cooled InGaAs array (1064 nm model)
- 10-inch capacitive touch screen and built-in library for fast spectral matching
- Android 7.1 (-A) or Windows 10 (-W) versions
- Built-in 10,200 mAh / 75 Wh battery for more than 4 hours of portable use

Specifications

Laser Wavelength	785 nm, 830 nm or 1064 nm (by model)
Laser Power	0–500 mW
Spectral Range	200–2750 cm^{-1} (785 nm) to 200–2000 cm^{-1} (1064 nm)
Optical Resolution	8–10 cm^{-1} (785 nm) to 20–30 cm^{-1} (1064 nm)
Detector	Back-illuminated CCD, cooled CCD or cooled InGaAs PDA (by model)
Sampling	Flexible Raman fiber probe
Display	10-inch capacitive touch screen
Operating System	-A: Android 7.1; -W: Windows 10
Software	Raman spectrum software app (Android or Windows) with built-in library
External Power	DC 12 V @ 4.17 A; AC 100–240 V, 50/60 Hz, 1.7 A
Built-in Battery	10,200 mAh, 75 Wh; more than 4 h operation
Dimensions	430 × 130 × 120 mm

Model overview

Part Numbers	Laser (nm)	Spectral Range (cm^{-1})	Resolution (cm^{-1})	Detector
FI-FO785-A, FI-FO785-W	785	200–2750	8–10	Back-illuminated CCD
FI-FO785E-A, FI-FO785E-W	785	200–2750	8–10	Cooled CCD
FI-FO830-A, FI-FO830-W	830	200–2500	10–12	Back-illuminated CCD
FI-FO830E-A, FI-FO830E-W	830	200–2500	10–12	Cooled CCD
FI-FO1064E-A, FI-FO1064E-W	1064	200–2000	20–30	Cooled InGaAs PDA

Typical applications

- Food and drug safety screening, including SERS
- Pharmaceutical raw material and excipient identification, process analytical technology (PAT)
- Drug and hazardous chemical testing
- Gemstone, art and cultural relic identification
- Forensic evidence and anti-counterfeiting
- Mineral composition analysis